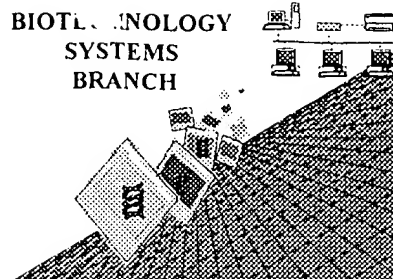


2V

RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/700,696

Source: PCT09

Date Processed by STIC: 1/23/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

Raw Sequence Listing Error Summary

ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER: 09/700,696

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics The number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2 Wrapped Aminos The amino acid number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3 Incorrect Line Length The rules require that a line not exceed 72 characters in length. This includes spaces.
- 4 Misaligned Amino Acid The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs
Numbering between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
- 5 Non-ASCII This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6 Variable Length Sequence(s) contain n's or Xaa's which represented more than one residue.
As per the rules, each n or Xaa can only represent a single residue.
Please present the maximum number of each residue having variable length and
indicate in the (ix) feature section that some may be missing.
- 7 PatentIn ver. 2.0 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
sequence(s) . Normally, PatentIn would automatically generate this section from the
previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section
to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223>
sections for Artificial or Unknown sequences.
- 8 Skipped Sequences Sequence(s) missing. If intentional, please use the following format for each skipped sequence:
(OLD RULES) (2) INFORMATION FOR SEQ ID NO:X:
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9 Skipped Sequences Sequence(s) missing. If intentional, please use the following format for each skipped sequence.
(NEW RULES) <210> sequence id number
 <400> sequence id number
 000
- 10 Use of n's or Xaa's Use of n's and/or Xaa's have been detected in the Sequence Listing.
(NEW RULES) Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 11 Use of <213>Organism Sequence(s) are missing this mandatory field or its response.
(NEW RULES)
- 12 Use of <220>Feature Sequence(s) are missing the <220>Feature and associated headings.
(NEW RULES) Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
 Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)
- 13 PatentIn ver. 2.0 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted
 file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).
 Instead, please use "File Manager" or any other means to copy file to floppy disk.

PCT09

RAW SEQUENCE LISTING DATE: 01/23/2001
 PATENT APPLICATION: US/09/700,696 TIME: 11:11:40

Input Set : A:\seq list.txt
 Output Set: N:\CRF3\01232001\I700696.raw

**Does Not Comply
 Corrected Diskette Needed**

pp 4-5

```

3 <110> APPLICANT: University College London
5 <120> TITLE OF INVENTION: A novel polypeptide hormone phosphatonin
7 <130> FILE REFERENCE: D1583PCT
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/700,696
C--> 10 <141> CURRENT FILING DATE: 2000-11-17
12 <160> NUMBER OF SEQ ID NOS: 25
14 <170> SOFTWARE: PatentIn Ver. 2.1
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 1655
18 <212> TYPE: DNA
19 <213> ORGANISM: Homo sapiens
21 <220> FEATURE:
22 <221> NAME/KEY: CDS
23 <222> LOCATION: (1)..(1290)
25 <400> SEQUENCE: 1
26 gtg aat aaa gaa tat agt atc agt aac aaa gag aat act cac aat ggc 48
27 Val Asn Lys Glu Tyr Ser Ile Ser Asn Lys Glu Asn Thr His Asn Gly
28 1 5 10 15
30 ctg agg atg tca att tat cct aag tca act ggg aat aaa ggg ttt gag 96
31 Leu Arg Met Ser Ile Tyr Pro Lys Ser Thr Gly Asn Lys Gly Phe Glu
32 20 25 30
34 gat gga gat gat gct atc agc aaa cta cat gac caa gaa gaa tat ggc 144
35 Asp Gly Asp Asp Ala Ile Ser Lys Leu His Asp Gln Glu Glu Tyr Gly
36 35 40 45
38 gca gct ctc atc aga aat aac atg caa cat ata atg ggg cca gtg act 192
39 Ala Ala Leu Ile Arg Asn Asn Met Gln His Ile Met Gly Pro Val Thr
40 50 55 60
42 gcg att aaa ctc ctg ggg gaa gaa aac aaa gag aac aca cct agg aat 240
43 Ala Ile Lys Leu Leu Gly Glu Glu Asn Lys Glu Asn Thr Pro Arg Asn
44 65 70 75 80
46 gtt cta aac ata atc cca gca agt atg aat tat gct aaa gca cac tcg 288
47 Val Leu Asn Ile Ile Pro Ala Ser Met Asn Tyr Ala Lys Ala His Ser
48 85 90 95
50 aag gat aaa aag aag cct caa aga gat tcc caa gcc cag aaa agt cca 336
51 Lys Asp Lys Lys Lys Pro Gln Arg Asp Ser Gln Ala Gln Lys Ser Pro
52 100 105 110
54 gta aaa agc aaa agc acc cat cgt att caa cac aac att gac tac cta 384
55 Val Lys Ser Lys Ser Thr His Arg Ile Gln His Asn Ile Asp Tyr Leu
56 115 120 125
58 aaa cat ctc tca aaa gtc aaa aaa atc ccc agt gat ttt gaa ggc agc 432
59 Lys His Leu Ser Lys Val Lys Lys Ile Pro Ser Asp Phe Glu Gly Ser
60 130 135 140
62 ggt tat aca gat ctt caa gag aga ggg gac aat gat ata tct cct ttc 480
63 Gly Tyr Thr Asp Leu Gln Glu Arg Gly Asp Asn Asp Ile Ser Pro Phe
64 145 150 155 160
66 agt ggg gac ggc caa cct ttt aag gac att cct ggt aaa gga gaa gct 528
67 Ser Gly Asp Gly Gln Pro Phe Lys Asp Ile Pro Gly Lys Gly Glu Ala

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/700,696

DATE: 01/23/2001
 TIME: 11:11:40

Input Set : A:\seq list.txt
 Output Set: N:\CRF3\01232001\I700696.raw

```

68          165          170          175
70 act ggt cct gac cta gaa ggc aaa gat att caa aca ggg ttt gca ggc 576
71 Thr Gly Pro Asp Leu Glu Gly Lys Asp Ile Gln Thr Gly Phe Ala Gly
72          180          185          190
74 cca agt gaa gct gag agt act cat ctt gac aca aaa aag cca ggt tat. 624
75 Pro Ser Glu Ala Glu Ser Thr His Leu Asp Thr Lys Lys Pro Gly Tyr
76          195          200          205
78 aat gag atc cca gag aga gaa gaa aat ggt gga aat acc att gga act 672
79 Asn Glu Ile Pro Glu Arg Glu Glu Asn Gly Gly Asn Thr Ile Gly Thr
80          210          215          220
82 agg gat gaa act gcg aaa gag gca gat gct gtt gal gtc agc ctt gta 720
83 Arg Asp Glu Thr Ala Lys Glu Ala Asp Ala Val Asp Val Ser Leu Val
84 225          230          235          240
86 gag ggc agc aac gat atc atg ggt agt acc aat ttt aag gag ctc cct 768
87 Glu Gly Ser Asn Asp Ile Met Gly Ser Thr Asn Phe Lys Glu Leu Pro
88          245          250          255
90 gga aga gaa gga aac aga gtg gat gct ggc agc caa aat gct cac caa 816
91 Gly Arg Glu Gly Asn Arg Val Asp Ala Gly Ser Gln Asn Ala His Gln
92          260          265          270
94 ggg aag gtt gag ttt cat tac cct cct gca ccc tca aaa gag aaa aga 864
95 Gly Lys Val Glu Phe His Tyr Pro Pro Ala Pro Ser Lys Glu Lys Arg
96          275          280          285
98 aaa gaa ggc agt agt gat gca gct gaa agt acc aac tat aat gaa att 912
99 Lys Glu Gly Ser Ser Asp Ala Ala Glu Ser Thr Asn Tyr Asn Glu Ile
100          290          295          300
102 cct aaa aat ggc aaa ggc agt acc aga aag ggt gta gat cat tct aat 960
103 Pro Lys Asn Gly Lys Gly Ser Thr Arg Lys Gly Val Asp His Ser Asn
104 305          310          315          320
106 agg aac caa gca acc tta aat gaa aaa caa agg ttt cct agt aag ggc 1008
107 Arg Asn Gln Ala Thr Leu Asn Glu Lys Gln Arg Phe Pro Ser Lys Gly
108          325          330          335
110 aaa agt cag ggc ctg ccc att cct tct cgt ggt ctt gat aat gaa atc 1056
111 Lys Ser Gln Gly Leu Pro Ile Pro Ser Arg Gly Leu Asp Asn Glu Ile
112          340          345          350
114 aaa aac gaa atg gat tcc ttt aat ggc ccc agt cat gag aat ata ata 1104
115 Lys Asn Glu Met Asp Ser Phe Asn Gly Pro Ser His Glu Asn Ile Ile
116          355          360          365
118 aca cat ggc aga aaa tat cat tat gta ccc cac aga caa aat aat tct 1152
119 Thr His Gly Arg Lys Tyr His Tyr Val Pro His Arg Gln Asn Asn Ser
120          370          375          380
122 aca cgg aat aag ggt atg cca caa ggg aaa ggc tcc tgg ggt aga caa 1200
123 Thr Arg Asn Lys Gly Met Pro Gln Gly Lys Gly Ser Trp Gly Arg Gln
124 385          390          395          400
126 ccc cat tcc aac agg agg ttt agt tcc cgt aga agg gat gac agt agt 1248
127 Pro His Ser Asn Arg Arg Phe Ser Ser Arg Arg Arg Asp Asp Ser Ser
128          405          410          415
130 gag tca tct gac agt ggc agt tca agt gag agc gat ggt gac 1290
131 Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser Asp Gly Asp
132          420          425          430

```

RAW SEQUENCE LISTING DATE: 01/23/2001
 PATENT APPLICATION: US/09/700,696 TIME: 11:11:40

Input Set : A:\seq list.txt
 Output Set: N:\CRF3\01232001\I700696.raw

```

134 lagtccacca ggagttccca gcggggtgac agtctgaaga cctcgtcacc tgtgagttga 1350
136 tglagaggag agccacctga cagctgacca ggtgaagaga ggatagagtg aagaactgag 1410
138 tgaqccaaga atccctggtct ccttggggga atttttgcta tcttaatagt cacagtataa 1470
140 aattctatta aaggtataaa tgtttttaag caaaaaaaaaa tcattacaga tctatgaaat 1530
142 aggtaacatt tgagtaggtg tcatttaaaa atagttggtg aatgtcaca atgccttcta 1590
144 tgttgtttgc tctgtagaca tgaaaataaa caatatctct cgatgataaa aaaaaaaaaa 1650
146 aaaaaa 1655
149 <210> SEQ ID NO: 2
150 <211> LENGTH: 430
151 <212> TYPE: PRT
152 <213> ORGANISM: Homo sapiens
154 <400> SEQUENCE: 2
155 Val Asn Lys Glu Tyr Ser Ile Ser Asn Lys Glu Asn Thr His Asn Gly
156 1 5 10 15
158 Leu Arg Met Ser Ile Tyr Pro Lys Ser Thr Gly Asn Lys Gly Phe Glu
159 20 25 30
161 Asp Gly Asp Asp Ala Ile Ser Lys Leu His Asp Gln Glu Glu Tyr Gly
162 35 40 45
164 Ala Ala Leu Ile Arg Asn Asn Met Gln His Ile Met Gly Pro Val Thr
165 50 55 60
167 Ala Ile Lys Leu Leu Gly Glu Glu Asn Lys Glu Asn Thr Pro Arg Asn
168 65 70 75 80
170 Val Leu Asn Ile Ile Pro Ala Ser Met Asn Tyr Ala Lys Ala His Ser
171 85 90 95
173 Lys Asp Lys Lys Lys Pro Gln Arg Asp Ser Gln Ala Gln Lys Ser Pro
174 100 105 110
176 Val Lys Ser Lys Ser Thr His Arg Ile Gln His Asn Ile Asp Tyr Leu
177 115 120 125
179 Lys His Leu Ser Lys Val Lys Lys Ile Pro Ser Asp Phe Glu Gly Ser
180 130 135 140
182 Gly Tyr Thr Asp Leu Gln Glu Arg Gly Asp Asn Asp Ile Ser Pro Phe
183 145 150 155 160
185 Ser Gly Asp Gly Gln Pro Phe Lys Asp Ile Pro Gly Lys Gly Glu Ala
186 165 170 175
188 Thr Gly Pro Asp Leu Glu Gly Lys Asp Ile Gln Thr Gly Phe Ala Gly
189 180 185 190
191 Pro Ser Glu Ala Glu Ser Thr His Leu Asp Thr Lys Lys Pro Gly Tyr
192 195 200 205
194 Asn Glu Ile Pro Glu Arg Glu Glu Asn Gly Gly Asn Thr Ile Gly Thr
195 210 215 220
197 Arg Asp Glu Thr Ala Lys Glu Ala Asp Ala Val Asp Val Ser Leu Val
198 225 230 235 240
200 Glu Gly Ser Asn Asp Ile Met Gly Ser Thr Asn Phe Lys Glu Leu Pro
201 245 250 255
203 Gly Arg Glu Gly Asn Arg Val Asp Ala Gly Ser Gln Asn Ala His Gln
204 260 265 270
206 Gly Lys Val Glu Phe His Tyr Pro Pro Ala Pro Ser Lys Glu Lys Arg
207 275 280 285
209 Lys Glu Gly Ser Ser Asp Ala Ala Glu Ser Thr Asn Tyr Asn Glu Ile

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/700,696

DATE: 01/23/2001

TIME: 11:11:40

Input Set : A:\seq list.txt

Output Set: N:\CRF3\01232001\I700696.raw

```

210      290      295      300
212 Pro Lys Asn Gly Lys Gly Ser Thr Arg Lys Gly Val Asp His Ser Asn
213 305      310      315      320
215 Arg Asn Gln Ala Thr Leu Asn Glu Lys Gln Arg Phe Pro Ser Lys Gly
216      325      330      335
218 Lys Ser Gln Gly Leu Pro Ile Pro Ser Arg Gly Leu Asp Asn Glu Ile
219      340      345      350
221 Lys Asn Glu Met Asp Ser Phe Asn Gly Pro Ser His Glu Asn Ile Ile
222      355      360      365
224 Thr His Gly Arg Lys Tyr His Tyr Val Pro His Arg Gln Asn Asn Ser
225      370      375      380
227 Thr Arg Asn Lys Gly Met Pro Gln Gly Lys Gly Ser Trp Gly Arg Gln
228 385      390      395      400
230 Pro His Ser Asn Arg Arg Phe Ser Ser Arg Arg Arg Asp Asp Ser Ser
231      405      410      415
233 Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser Asp Gly Asp
234      420      425      430
238 <210> SEQ ID NO: 3
239 <211> LENGTH: 4
240 <212> TYPE: PRT
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
245 Sequence
247 <400> SEQUENCE: 3
248 Ser Gly Asp Gly
249 1
253 <210> SEQ ID NO: 4
254 <211> LENGTH: 7
255 <212> TYPE: PRT
256 <213> ORGANISM: Artificial Sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
260 Sequence
262 <400> SEQUENCE: 4
263 Ala Asp Ala Val Asp Val Ser
264 1 5
268 <210> SEQ ID NO: 5
269 <211> LENGTH: 22
270 <212> TYPE: PRT
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
275 Sequence
277 <400> SEQUENCE: 5
278 Ser Ser Arg Arg Arg Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser
279 1 5 10 15
281 Ser Ser Glu Ser Asp Gly
282 20

```

*give source of genetic material -
see circled portion
of Item 12 on Error
Summary
Sheet*

this is invalid

RAW SEQUENCE LISTING DATE: 01/23/2001
 PATENT APPLICATION: US/09/700,696 TIME: 11:11:40

Input Set : A:\seq list.txt
 Output Set: N:\CRF3\01232001\I700696.raw

```

286 <210> SEQ ID NO: 6
287 <211> LENGTH: 21
288 <212> TYPE: PRT
289 <213> ORGANISM: Artificial Sequence
291 <220> FEATURE:
292 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
293 Sequence
295 <400> SEQUENCE: 6
296 Ser Ser Arg Ser Lys Glu Asp Ser Asn Ser Thr Glu Ser Lys Ser Ser
297   1           5           10           15
299 Ser Glu Glu Asp Gly
300           20
304 <210> SEQ ID NO: 7
305 <211> LENGTH: 14
306 <212> TYPE: PRT
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
311 Sequence
313 <400> SEQUENCE: 7
314 Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser
315   1           5           10
319 <210> SEQ ID NO: 8
320 <211> LENGTH: 38
321 <212> TYPE: DNA
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
326 Sequence
328 <400> SEQUENCE: 8
329 gacgacgaca aggtgaataa agaatatagt atcagtaa
332 <210> SEQ ID NO: 9
333 <211> LENGTH: 15
334 <212> TYPE: PRT
335 <213> ORGANISM: Artificial Sequence
337 <220> FEATURE:
338 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
339 Sequence
341 <400> SEQUENCE: 9
342 Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser
343   1           5           10           15
347 <210> SEQ ID NO: 10
348 <211> LENGTH: 16
349 <212> TYPE: PRT
350 <213> ORGANISM: Artificial Sequence
352 <220> FEATURE:
353 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificial
354 Sequence
356 <400> SEQUENCE: 10

```

*Please correct
 this error
 in subsequent
 sequences*

VERIFICATION SUMMARY DATE: 01/23/2001
PATENT APPLICATION: US/09/700,696 TIME: 11:11:41

Input Set : A:\seq list.txt
Output Set: N:\CRF3\01232001\I700696.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date